



Water Quality Measurements Factsheet

Water quality and chemical measurements are made in the rivers, lakes, and wetlands of Vermont. Monitoring of water quality parameters provides a “snapshot” of current conditions and is most useful when multiple samples are collected over time and under different flow conditions (for rivers). Measurements are used to detect changes in water quality and determine whether streams or lakes meet the safe levels included in the Vermont Water Quality Standards.

Water Quality and Chemical Parameters

Parameter	Description	Water Quality Standard*
Chloride	Used to determine impacts from deicing products like road salt, and wastewater discharges.	<260 parts-per-million (ppm).
Conductivity	A measure of the ability of water to carry electrical current, higher levels of conductivity suggest the presence of chlorides or other toxic metals.	There are no specific water quality limits for conductivity.
Dissolved oxygen	Used by aquatic organisms to breathe	5-7 ppm, 60-95% saturation.
Nitrogen (Nitrates)	Nutrient that may fuel algae blooms	No more than 0.2 ppm of nitrate >2,500 ft. elevation, no more than 2.0ppm <2500 ft. elevation in Class A1 and A2 waters, and no more than 5.0 ppm all other flowing waters.
pH (acidity)	A measure of the acidity of waters	6.5-8.5 standard units
Phosphorus	Nutrient that may fuel algae blooms	No more than 9-27ppb at low median monthly flow depending on stream type.
Secchi Transparency	Measurement of water transparency in lakes and ponds	
Turbidity	A measure of suspended fine materials in waters that result in a cloudy or murky appearance.	No more than 10 “nephelometric turbidity units (NTU)” for Class A1 and cold water fishery, and 25 NTU all other waters, expressed as an annual average at low flow.

Additional Information

The Vermont Surface Water Management Strategy provides descriptions of all of the common pollutants in Vermont, here:

<http://dec.vermont.gov/watershed/map/strategy>

The Vermont Water Quality Standards can be found here:

http://dec.vermont.gov/sites/dec/files/documents/WSMD_WaterQualityStandards_2014.pdf